Mechanical & Electrical Methodology
Planning Condition 4
Condition Number 136161/LO/2023

GENERAL HERITAGE MANAGEMENT PRINCIPLES

All significant interventions notified and preceded through documentary research and detailed visual and if necessary, physical investigation.

Works will be planned to ensure minimum intervention and disturbance to the fabric of the building. Proposed works will be evaluated and for their potential impact on the fabric of the building and notified accordingly.

Intervention works have been carefully considered and justified in terms of its necessity as a repair, an adaptation which better reveals it's significance, or an enhancement which extends is sustainable use.

Interventions to the fabric which protect or better reveal the buildings heritage will be encouraged, and change which could cause unmitigated harm to the significance of the building will be avoided.

Every element of the works will be completed sympathetically by competent operatives with a proven track record of working within a Grade ll Listed environment. The project culture of care, consideration and preservation of the buildings heritage will be maintained.

This culture will be administered via contractor selection, induction, and relevant toolbox talks throughout the duration of the project.

If required, the heritage consultant will be engaged as works progress to mitigate any detrimental effect on the heritage components of the building.

Before any works commence, the management team will carry out a review of the work area to understand the building fabric within and adjacent to the space.

METHODOLOGY

Fixing Methodology for the Mechanical Installation on Coffered Ceiling:

Fan coil unit

- All fixings are to be drilled a minimum of 100mm up from the bottom of the structural beam.
- A 35mm deep 6 mm hole will then be drilled.
- Angle bracket will then be installed and fixed to the side off the structural beam using a 35mm HUSS concrete screw.
- M10 rod will then be secured through the angle bracket to allow Unistrut to be fixed to the underside of the coffer.
- The fan coil is then to be hung from the Unistrut supported via the angle bracket.

HVRF pipework containment

- All fixings are to be drilled a minimum of 100mm up from the bottom of the structural concrete beam.
- A 35mm deep 6 mm hole will then be drilled.
- Angle bracket will then be installed and fixed to the side off the structural beam using a 35mm HUSS concrete screw.
- M8 rod will then be secured through the angle bracket to allow Unistrut to be fixed to the underside of the coffer.
- All containment will then be hung from the Unistrut supported via the angle bracket.

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Duct work

- All fixings are to be drilled a minimum of 100mm up from the bottom of the structural concrete beam.
- A 35mm deep 6 mm hole will then be drilled.
- An 6mm knock in anchor will then be installed utilising an 6mm washer.
- All duct work will then be installed using a gripple wire.

LTHW pipework

- All fixings are to be drilled a minimum of 100mm up from the bottom of the structural concrete beam.
- A 35mm deep 6 mm hole will then be drilled.
- Angle bracket will then be installed and fixed to the side off the structural beam using a 35mm HUSS concrete screw.
- M10 rod will then be secured through the angle bracket to allow Unistrut to be fixed to the underside of the coffer.
- All containment will then be hung from the Unistrut supported via the angle bracket.

Plumbing pipework

- All fixings are to be drilled a minimum of 100mm up from the bottom of the structural concrete beam.
- A 35mm deep 6 mm hole will then be drilled.
- Angle bracket will then be installed and fixed to the side off the structural beam using a 35mm HUSS concrete screw.
- M10 rod will then be secured through the angle bracket to allow Unistrut to be fixed to the underside of the coffer.
- All containment will then be hung from the Unistrut supported via the angle bracket.

Drainage pipework

- All fixings are to be drilled a minimum of 100mm up from the bottom of the structural concrete beam.
- A 35mm deep 6 mm hole will then be drilled.
- Angle bracket will then be installed and fixed to the side off the structural beam using a 35mm HUSS concrete screw.
- M8 rod will then be secured through the angle bracket to allow Unistrut to be fixed to the underside of the coffer.
- All containment will then be hung from the Unistrut supported via the angle bracket.

Fixing Methodology for the Electrical Installation on Coffered Ceiling:

Containment including cable tray & basket suspended on a trapeze Unistrut bracket

- Distance between Trapeze brackets will no greater than 1200mm.
- All fixings are to be drilled a minimum of 100mm up from the bottom of the structural beam.
- A 40mm deep 6 mm hole will then be drilled.
- Angle bracket will then be installed and fixed to the side off the structural beam using a 40mm MCS6x40LP concrete screw.
- M8 rod will then be secured through the angle bracket to allow Unistrut to be fixed to the underside of the coffer.
- All containment will then be hung from the Unistrut supported via the angle bracket.

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Steel Conduit containment

- All fixings are to be drilled a minimum of 100mm up from the bottom of the structural concrete beam.
- A 50mm deep 5 mm hole will then be drilled.
- A distance saddle will then be fixed using a 6C45 countersunk concrete screw.
- The distance between saddles will comply with the BS7671 regulations.

Cables fixed directly to the structure

- All fixings are to be drilled a minimum of 100mm up from the bottom of the structural concrete beam.
- Where cables leave the cable containment to terminate into an accessory i.e., a smoke detector the cables will be fixed directly to the building structure using a metal cable clip.
- A 40mm deep 5mm hole will be drilled.
- A metal cable clip will then be fixed using a WS6X30 Pan head concrete screw.
- The distance between clips will comply with the current body of regulations.

DRAWING REGISTER

Please refer to the following document:

1394-GHB-XX-XX-SH-ME-0001 – Document Register

Elevations
241111_Sunlight House_electrical elevations
SLH-ANO-P0-XX-DR-A-34710

FOH Rise Bulkhead Extension
12th floor containment – Original
12th Floor Containment R2 – Bulkhead Extension
Bulkhead Updates Markup
SLH-ANO-P0-XX-DR-A-38706
Sunlight House_Central office bulkhead extensions

The following documents are also included in this submission:

1298-CSD-ZZ-ZZ-SH-E-62001 – Distribution Board Schedule
Revision: P01
1298-CSD-ZZ-ZZ-SH-E-62002 – Switch Board Schedule
Revision: P01
SLH-ANO-P0-XX-DR-A-05410 – Window Louvre Locations